LIBRARY
CURRENT SERIAL RECORD
DEC 14 1945
U.S. DEPARTMENT OF AGRICULTURE

THE PLANT DISEASE REPORTER

Issued by

THE PLANT DISEASE SURVEY, DIVISION OF MYCOLOGY AND DISEASE SURVEY
BUREAU OF PLANT INDUSTRY, SOILS, AND AGRICULTURAL ENGINEERING
AGRICULTURAL RESEARCH ADMINISTRATION
UNITED STATES DEPARTMENT OF AGRICULTURE

Volume XXIX November 15, 1945 Number 27

The Plant Disease Reporter is issued as a service to plant pathologists throughout the United States. It contains reports, summaries, observations, and comments submitted voluntarily by qualified observers. These reports often are in the form of suggestions, queries, and opinions, frequently purely tentative, offered for consideration or discussion rather than as matters of established fact. In accepting and publishing this material the Division of Mycology and Disease Survey serves merely as an informational clearing house. It does not assume responsibility for the subject matter.

IN THIS ISSUE

Check list revision, by Freeman Weiss, page 688.

W. S. Fields compiles a summary of the more important plant diseases taken in connection with the insect and plant disease survey in the general vicinity of ports of entry from January 1945 to June 30, 1945, page 693.

C. E. Yarwood sends a second list of unreported powdery mildew, page 698.

Howard W. Larsh reports the finding of elm phloem necrosis in Arkansas and Oklahoma, page 699.

A crown and stem canker of snapdragon, caused by Myrothecium roridum, is reported by Stephen Wilhelm, William Gunesch, and Kenneth F. Baker, page 700.

Ralph W. Dexter describes the condition of eelgrass as observed at locations in Massachusetts and Connecticut, page 702.

A report of current vegetable disease conditions in Palm Beach and Broward Counties, Florida, is contributed by G. R. Townsend, R. C. Cassell, and E. L. Felix, page 704.

P. A. Young reports the finding of tomato tip blight in East Texas, and discusses damage caused by other tomato diseases, page 706.

Boron deficiency symptoms on apple have recently become noticeable in the Cumberland Valley of Pennsylvania, according to F. H. Lewis and F. N. Hewetson, page 706.

In brief notes, page 707, R. E. Vaughan reports seed treatment of rutabaga seed, and P. A. Young reports charcoal rot on corn.

October weather, page 707.

CHECK LIST REVISION*

Freeman Weiss

ABRUS (LEGUMINOSAE)

ABRUS PRECATORIUS L., ROSARY-PEA. Woody vine of tropical regions, grown for ornament and for the seeds which are used in beadwork.

Heterodera marioni (Cornu) Goodey, root knot. ?Fla. Resistant.
Phyllachora perforans (Rehm) Sacc. & Syd., black leaf spot. P.R.

ALYSICARPUS (LEGUMINOSAE)

ALYSICARPUS VAGINALIS DC., ALYCE-CLOVER. Annual, of the Oriental tropics, cult. in the southern part of the Gulf States for forage and hay.

Heterodera marioni (Cornu) Goodey, root knot. Fla.

AMPHICARPA (LEGUMINOSAE)

AMPHICARPA BRACTEATA (L.) Fern. (A. monoica (L.) Ell.), including var. COMOSA (L.) Fern. (A. pitcheri Torr. & Gray), HOG-PEANUT. Twining perennials bearing subterranean pods, occurring in woodlands in the Northeastern and Central States; of food value to wildlife, sometimes a weed in cultivated areas.

Cercospora monoica Ell. & Holw., leaf spot. Ill., Ind., Iowa, Ohio, Wis.
C. simulans Ell. & Kell. W.Va.
Colletotrichum sp. leaf spot. W.Va.
Erysiphe polygoni DC., powdery mildew. General in northern part of host range.
Parodiella perisporioides (Berk. & Curt.) Speg., on leaves. Md.
Puccinia andropogonis Schw. var. onobrychidis (Burr.) Arth. (O,I), rust. Iowa, N.Dak., Wis. II and III on Andropogon spp.
Synchytrium aecidioides (Pk.) Lagh. (S. decipiens Farl.), false rust, leaf gall. Me. to Ala., Kans. and N.Dak.
Trichosporium falcatae Dearn. & Barth., on leaves. Tex. (2)

---

* The current sections to be issued in this series will cover field and vegetable crops, and ornamental plants, belonging to the family Leguminosae. Arborescent members of this family have already been covered in the sections of the Revised Check List that dealt with trees and shrubs. Separates of the sections on grasses and sedges will be distributed to those who have previously requested or who now request them. A renewed invitation is given to those requesting separates, as well as others, to advise the author of omissions and errors.

ANTHYLLIS (LEGUMINOSAE)

ANTHYLLIS VULNERARIA L., KIDNEY-VETCH. European perennial, grown for forage on poor soils or sometimes for ornament.

Fusarium sp., leaf and stem blight. N.Car.
Phyllosticta sp., leaf spot. N.Car. P. anthyllidis Baudys causes a leaf spot of this plant in Europe.

APIOS (LEGUMINOSAE)

APIOS AMERICANA Medic. (A. TUBEROSA Moench), POTATO-BEAN. Twining perennial with tuberiferous stolons, in woodlands from the Atlantic Coast to the Mississippi Valley; of food value to wildlife.

Alternaria sp., leaf spot. N.Y.
Cercopsora tuberosa Ell. & Kell., leaf spot. Mass. to Fla. Kans. and Wis.
Erysiphe polygoni DC., powdery mildew. Ind.
Microsphaera alni DC. ex Wint., powdery mildew. Ala., Miss., Ohio.
M. diffusa Cke. & Pk. Miss., Nebr., Tenn.
Puccinia andropogonis Schw. var. onobrychidis (Burr.) Arth. (O,I), rust. Iowa, Minn., Nebr.

ARACHIS (LEGUMINOSAE)

ARACHIS HYPOGAEA L., PEANUT. Annual herb, probably native to S. America, cult. for edible seeds and the derived oil chiefly in 3 districts -- Va. & N.Car., Ga. & Ala.; Ark., La., Okla. and Tex.; also for livestock feed and hay on sandy soil in all the Southeastern and Gulf States.

Alternaria sp., secondary leaf spot. Fla., Mo., N.J., N.Mex., S.Car.
Aphelenchoides parietinus (Bast.) Steiner, on stunted plants. Miss.
Ascochyta sp., ?leaf spot. Ark.
Bacterium solanacearium E.F.Sm., bacterial wilt. Ala., Fla., Ga., N.Car., Va.
Botrytis cinerea Pers., gray mold leaf and stem rot. Conn., Md., Miss., Tenn., Va.
(Cercospora arachidicola Hori): Mycosphaerella arachidicola
(C. personata (Berk. & Curt.) Ell. & Ev.): Mycosphaerella berkeleyi
Cladosporium herbarum Pers. ex Lk., black mold of pods. Cosmopolitan.
Colletotrichum sp., stem spot. Ark., Okla.
Curvularia inaequalis (Shear) Boed., ?root rot. S.Car.
Diaporthe sojae Lehman, stem blight. Va., W.Va.
Diplodia sp. (probably mostly D. natalensis Pole-Evans), stem rot, pod rot. Va. to Fla. and Tex. See also Physalospora rhodina
Fusarium spp., root and stem rot, pod spot. wilt. Occasional from Va. to Fla., Tex. and Mo. The spp. associated with these conditions and their causal relation thereto have not been criti-

ARACHIS HYPOGAEA cont.

cally determined. F. solani (Mart.) App. & Wr. var. phaseoli Burkh. (=F. solani var. Martii (App. & Wr.) Wr. f. 3 Snyder, or F. solani f. phaseoli (Burkh.) Snyder & Hansen) has been shown to cause a seedling root rot and wilt in Ga. F. vasinfectum Atk. (F. oxysporum f. vasinfectum (Atk.) Snyder & Hansen), present on diseased roots in Ga., N. and S.Car. and Va., is reported parasitic to seedlings in N.Car. It has been erroneously reported as Neocosmospora vasinfecta E.F.Sm. Other Fusarium spp. identified on peanuts are: F. lateritium Nees, on pods, S. Car.; F. moniliforme Sheldon, on pods or associated with seedling root rot, Ark., N.Car. and Okla.

Helminthosporium sp., root rot. Okla.

Heterodera marioni (Cornu) Goodey, root knot. Calif., Fla., Ga., N.Car., Tex., Hawaii. Usually resistant.

Macrophomina phaseoli (Maub.) Ashby, charcoal root and stem rot, seed rot ("concealed damage"). Colo., N.&S.Car., Okla., Tex. Includes reports as Sclerotium bataticola Taub.

Mycosphaerella arachidicola W.A.Jenkins, brown leaf spot, halo spot. General in the Southern States.

M. berkeleyi W.A.Jenkins, leaf spot. General, including Hawaii and the West Indies.

Neocosmospora vasinfecta E.F.Sm., on roots and pods (saprophytic). Ala., Ga.

Panagrolaimus subelongatus (Cobb) Thorne, nematode associated with shoot proliferation. Tenn.

Penicillium sp., blue mold of pods, sometimes on nuts. Cosmopolitan.

Phoma sp., root and stem rot, Ala., Ga. Secondary leaf spot, Mo., Va.

Phyllosticta sp., leaf spot. Ala., Ark., Miss., Hawaii. ?Spermatial stage of Mycosphaerella

Phymatotrichum omnivorum (Shear) Dugg., root rot. Ariz., Tex.

Physalospora rhodina (Berk. & Curt.) Cke., stem rot (? secondary), pod rot. Fla., Ga.

Pleospora sp., stem and leaf spot. Ark., Okla.

Puccinia arachidis Speg. (II,III), leaf rust. P.R. (and throughout the West Indies); occasionally in Fla., Ga., Tex. in the II stage only.

Pythium sp., root rot. Calif., Ga., N.Car. P. ultimum Trow identi- in N.Car.

Rhizobium sp., root nodule bacteria. General in areas of commercial cultivation, inoculation required elsewhere; belongs to cowpea race.

Rhizoctonia sp. (R. solani Kuehn), seedling blight, root rot, nut rot. N.Car. to Fla., Tex. and Okla.; Calif.

Rhizopus spp. (R. artocarpi Rac. and R. stolonifer (Ehr. ex Fr.) Lind, seed rot. S.Car.

Sclerotium bataticola Taub. See Macrophomina phaseoli.

S. rolfsii Sacc. (Corticium rolfsii Curzi), stem rot, nut rot, southern blight. General in the Southern States from Va. to Fla., Ariz. and Okla.; Hawaii, P.R.

ARACHIS HYPOGAEA cont.

Stemphylium sp. (reported as Macrosporium commune Rab. f. arachidis Sacc.), leaf spot (secondary?). N.Dak.

Thielaviopsis basicola (Berk. & Br.) Ferr., root rot. N.Car.

Trichoderma viride Pers. ex Fr., seed rot. S.Car.

Chlorosis -- mineral deficiency associated with soil alkalinity or excess of lime. Fla., Tex.

Necrotic spot -- cause unknown, ?nutritional deficiency. Ga.

"Pops" -- empty but superficially normal pods, ?nutritional (potassium or magnesium) deficiency. N.Car.

"Pouts" -- a non-specific term applied to various forms of stunting of peanut seedlings, but especially to the chlorotic spotting caused by thrips. N.Car., Tex., Va.

Stunt -- unidentified virus, transmissible by juice. Tex.

Witches'-broom -- cause unknown. Okla., Tex.

ASTRAGALUS (LEGUMINOSAE)

ASTRAGALUS spp., MILKVETCH, in part also poison-vetch, loco-weed. A large group of mostly perennial herbs, occurring commonly on prairies, plains and foothills throughout the Western States, especially from S.Dak. and Wyo. to Tex. and Ariz.; a few spp. ranging northward, also in the East and South. Some kinds are grazed by all classes of livestock when other forage is scarce but their value is far offset by their hazard as poisonous plants, which is due either to accumulation of selenium in their tissues, when growing on soils containing this element (A. bisulcatus (Hook.) A. Gray, A. pectinatus Dougl., A. racemosus Pursh, and others, are specific indicator-plants for selenium), or to toxic alkaloids (e.g. A. mollissimus Torr.). Some spp. furnish food for wildlife or are useful in erosion control; several are ornamental but have not been brought into cultivation.

Colletotrichum carpophilum Kell. & Swing., on pods of A. crassicarpus Nutt., Kans.

Dendryphium nubilosum Ell. & Ev., on leaves and stems of A. flexuosus Dougl., in Mont.; on A. parryi A. Gray, in Colo.

Didymaria astragali (Ell. & Holw.) Sacc., leaf spot. On A. canadensis L. in Iowa, Ill., Kans., Nebr., N.Dak., Wis.

Erysiphe polygoni DC., powdery mildew. Common on many spp. throughout their range.

Fusarium spp., wilt, stem rot. On A. mollissimus, Tex. On A. canadensis, Wis.; F. moniliforme Sheldon and ?F. tricinctum (Cda.) Sacc. identified.

Fusicladium brevipus Ell. & Ev., on leaves of A. hypoglottis L., in Colo.

Gloeosporium davisii Ell. & Ev., on leaves of A. canadensis Wis.

Microsphaera euphorbiae (Pk.) Berk. & Curt., powdery mildew. On A. neglectus (Torr. & Gray) Sheldon, and A. striatus Nutt. in Colo., Mont. and N.Y. American records of M. astragali (DC.)

ASTRAGALUS spp., cont.

Trev. belong here.

Mycosphaerella pachyasca (Rostr.) Vest., on leaves of A. alpinus L., S.Dak.

Napicladium astragali Ell. & Ev., on leaves of A. chamaeleuce A. Gray, in Mont.

Peronospora trifoliorum D By, downy mildew. On A. canadensis L., A. lotiflorus Hook., in Iowa, Kans., Minn., Mont., N.&S.Dak., Wis. This has also been called P. astragali Syd. ex Gäum. Peronospora sp. on A. melilotoides Pall. in Wash.

Phoma astragali Cke. & Harkn., on stems of A. bisulcatus, A. canadensis, A. goniatus Nutt., and A. menziesii A. Gray, in Calif., Kans. and N.Dak.

Phyllosticta astragali Pk., leaf spot. Minn., Mont., Wash.

Physalospora astragali (Lasch) Sacc., P. aurantia Ell. & Ev., P. megastoma (Pk.) Sacc. (also reported as Physalosporina megastoma (Pk.) Woron. See Polystigma astragali

Polystigma astragali (Lasch) Hoehn., leaf spot. On A. bisulcatus, A. flexuosus, A. hypoglottis, A. pectinatus, and A. striatus Dougl., in Colo., Mont., N.Dak., Utah, Wyo. Physalospora aurantia Ell. & Ev., P. astragali (Lasch.) Sacc., and P. megastoma (Pk.) Sacc. (=Physalosporina m. (Pk.) Woron.) are probably synonyms.

Pyrenophora comata (Auers. & Niessl) Sacc., on leaves of A. striatus, Wyo.

Septoria astragalicola Pk., leaf spot. On A. drummondii Dougl. and A. striatus Nutt. in Ariz., Colo. and Mont.

S. psammophila Sacc. On A. pectinatus, N.Dak.

Stemphylium sp., leaf spot. On A. falcatus Lam., Wash.

Thecaphora deformans Dur. & Mont., seed smut. On A. allochrous A. Gray, A. bisulcatus, A. crassicarpus Nutt., A. diphysus A. Gray, A. drummondii, A. missouriensis Nutt., A. nuttallianus DC., A. scopulorum Porter, A. tenellus Pursh, A. Thompsonae Watson, A. wootoni Sheldon, Ariz., Colo., N.Mex., Utah, Wyo.

Uromyces lapponicus Lagh. (O,I,II,III), rust. On A. alpinus L. and A. flexuosus Dougl. from Alaska to Oreg. and Colo. The I stage is systemic.

U. punctatus Schroet. (II,III), rust. On numerous spp. from Wis. to Tenn., Tex., Calif. and Wash. O and I on Euphorbia spp. in Europe.

Volutella occidentalis Ell. & F.W. Anderson, on stems. Mont. On A. drummondii and A. flexuosus.

DIVISION OF MYCOLOGY AND DISEASE SURVEY

SUMMARY OF THE MORE IMPORTANT PLANT DISEASES TAKEN IN CONNECTION WITH THE INSECT AND PLANT DISEASE SURVEY IN THE GENERAL VICINITY OF PORTS OF ENTRY FROM JANUARY 1945 TO JUNE 30, 1945

Compiled by W. S. Fields

Actinopelte dryina (Sacc.) Hoehn. on Castanea dentata, September 28, 1944, Morris Plains, New Jersey (Mycologia 37:1, p. 129, 1945.)

Albugo candida (Pers.) Rouss. on Dithyrea californica (desert plant,) February 19, 1945, guayule plantings west of airport, Yuma, Arizona.

Alternaria sp. on Zinnia elegans, October 13, 1944, Milwaukie, Oregon.

Ascochyta sp.(not A. teretiuscula Sacc. & Roum. which appears to be the only species reported on Cyperus) on Cyperus (esculentus ?), September 27, 1943, Richmond Hill, Georgia.

Ascochyta sp. on Sambucus callicarpa, June 13, 1945, Long Beach, Washington.

Ascochyta caricae Rab. causing large leaf spots on Ficus carica, October 20, 1944, Milwaukie, Oregon. Apparently not reported in the United States.

Ascochyta nicotianae Pass. on Nicotiana tabacum, September 12, 1944, Long Beach, Washington. This may be a new record, according to D. P. Limber.

Botryosphaeria ribis Gross. & Dugg. on Taxus baccata fastigiata, September 2, 1943, Philadelphia, Pennsylvania. "Do not find any report of this fungus on Taxus." (E. K. Cash).

Cercospora fici Heald & Wolf on Ficus repens, December 12, 1944, Brookgreen Gardens, South Carolina. This Cercospora not reported on this host species.

Cercospora kalmiae Ell. & Ev. on Kalmia latifolia, January 15, 1945, Theodore, Alabama. This fungus apparently has been reported previously only as far south as West Virginia.

Cercospora sp. (not C. heteromeles Harkn.) on Photinia serrulata, December 20, 1943, Richmond Hill, Georgia. "Do not find any Cercospora represented on Photinia with which this agrees." (E. K. Cash) What appears to be the same species was collected on same host, February 4 and 17, 1945 at New Orleans, and March 28, 1945 at Baton Rouge, Louisiana.

Cercospora sp. on Mahonia bealei, February 2, 1945, Kenner, Louisiana. Apparently a new host for Cercospora.

Cochliobolus heterostrophus Drechs. on corn, April 28, 1944, San Benito, Texas.

Colletotrichum antirrhini Stewart on Antirrhinum majus, in nursery, March 7, 1945, Kenner, Louisiana.

Coryneum kunzei Cda. (not var. castanea Sacc. & Roum.) on Castanea dentata, May 13, 1945, Watnong Mt., New Jersey. (D. P. Limber.)

Clyindrosporium ceanothi Ell. & Ev. on Ceanothus sanguineus, August 14, 1944, White Salmon, Washington.

Dendrophoma caespitosa Sacc., Pleospora (eustigiae (Cke.) Sacc. ?) on Salix nigra, November 28, 1944, Seattle, Washington. "No record of Pleospora on Salix in the United States; Dendrophoma seems to

be a new report for this host in this country also." (D. P. Limber).

Dilophospora sp. on rye, June 24, 1944, near Reedville, Oregon.

Diplodina grossulariae Sacc. & Briand on Ribes (grossularia ?)(gooseberry), May 1, 1944, Liberty, Oregon.

Diplodina dahliae Hollos on Dahlia variabilis, October 11, 1944, Vancouver, Washington.

Entyloma meliloti McAlp. on Melilotus indica, March 24, 1944, Somerton, Arizona. Apparently a first report for Arizona of this smut.

Entyloma meliloti McAlp. on Melilotus officinalis, February 9, 1945, Kenner, Louisiana. Dr. G. L. Zundel, who examined some of the material, states that this is a new host for this smut.

Entyloma fuscum Schroet. on cultivated double poppy, May 4, 1945, Lutcher, Louisiana.

Entyloma fuscum Schroet. on Papaver dubium, March 20, 1945, near Baton Rouge, Louisiana. Specimen sent to Dr. Zundel, who states that this is a new host plant for the smut.

Erysiphe cichoracearum DC. (Oidium only) on Florestina tripteria, May 2, 1944, Brownsville, Texas. "This is the first fungus ever reported on the genus as far as I can find." (J. A. Stevenson).

Erostrotheca multiformis G. H. Martin & Charles (conidial stage, Cladosporium album Dowson) on Lathyrus latifolius, October 29, 1943, Freeland, Washington.

Exobasidium camelliae var. gracilis Shirai on Camellia sasanqua, April 25, 1945, Avery Island, Louisiana.

Exobasidium camelliae Shirai on Camellia sasanqua, January 21 and 24, 1944, New Iberia, Louisiana; Avery Island, March 21, 1944.

Exosporium sp. on Pithecolobium dulce, May 15, 1944, Coral Gables, Florida. Apparently an undescribed species.

Gloeosporium yuccigenum Ell. & Ev. on Yucca gloriosa, March 26, 1945, Baton Rouge, Louisiana.

Gloeosporium sp. and Phyllosticta sp. on Lithocarpus comu, November 8, 1943, Savannah, Georgia. No reports found of these fungi on this host in the United States.

Hadrotrichum globiferum (Ell. & Ev.) Davis on Lupinus sp., June 27, 1944, Cedarhill, Oregon.

Heterosporium betae Dowson on Beta vulgaris macrorhiza, October 1, 1943, E. Stanwood; October 6, 1943, Longview, Washington. "Reported on beet leaves in Germany but no record found from North America." (E. K. Cash).

Hysteropezizella andropogonis (Berk. & Curt.) Nannf. on Erianthus contortus, April 16, 1944, Morris Plains, New Jersey. According to J. A. Stevenson this fungus will be published under a new name. Heretofore known on Andropogon, but new on Erianthus.

Leptostromella andropogonis Dearn. & House on Andropogon scoparius, January 12, 1944, Foley, Alabama. "No specimen available for comparison but spores fit description of this species," (E. K. Cash).

Macrophoma sp. on lemon twigs, January 15, 1944, Redondo Beach, California. "Does not agree with species described on citrus." (E. K. Cash).

Macrophoma sp. and Septoria sp. on Carissa grandiflora, February 7, 1944, Santa Monica, California. "Nothing in either genus described on Carissa." (E. K. Cash).

Macrophoma yuccae Maffei on Yucca sp., September 29, 1943, Sea Island, Georgia. Reported in Italy but not in the United States.

Marssonina sp. on Sagittaria sp., April 8, 1944, Lockport, Louisiana.

Melanconium sp. (not M. palmarum Cke.) on Sabal sp., November 21, 1943, Savannah, Georgia.

Monochaetia sp., Colletotrichum sp.,and Phoma sp. on Cinnamomum camphora, January 21, 1944, Ocean Springs, Mississippi.

Mycosphaerella citrullina (C. O. Smith) Gross. (Ascochyta stage) on watermelon, October 11, 1944, Vancouver, Washington; on cucumber, September 28, 1944, Portland, Oregon.

Mycosphaerella sp. on Smilax glauca, September 28, 1943, Waverly, Georgia. "A new species, at least not M. smilacicola (Cke.) Overholts." (D. P. Limber).

Mycosphaerella arbuticola (Pk.) House on Umbellularia californica, May 3, 1945, Roseburg, Oregon.

Myxosporium sp. on Castanea crenata, April 22, 1944, Olympia, Washington.

Nectria punicea Fr. on Juglans regia, September 22, 1945, Vancouver, Washington.

Neottiospora yuccaefoliae Hall on Yucca sp., December 7, 1944, Pawleys Beach, South Carolina. Apparently reported only from Washington State.

Oidium mangiferae Berthet on Mangifera indica, November 23, 1944, Encinitas, California. Apparently first report for California and Western United States. Reported from West Indies, Brazil, Africa, Southern Asia.

Ovularia, n. sp. on Lupinus sp. (cult.), May 19, 1944, E. Stanwood, Washington. (Description to be published).

Ovularia schwarziana P. Magn. on Vicia (atropurpurea ?), October 28, 1943, Bremerton, Washington.

Pestalotia sp. on Leca aspera, June 19, 1945, Plant Introduction Gardens, Savannah, Georgia. Genus not reported on this host.

Phaeosphaerella typhae (Lasch) Petr. on Typha latifolia, December 1, 1943, Richmond Hill, Georgia. (Det. E. K. Cash).

Phomopsis padina (Sacc.) Died. on Prunus avium, October 15, 1943, South Bend, Washington.

Phyllosticta dearnessii Sacc. on Rubus procerus, June 2, 1944, Astoria, Oregon. Not reported on this host species.

Phyllosticta grossulariae Sacc. on Ribes sativum, June 20, 1944, Portland, Oregon. Apparently no record of this fungus from Oregon.

Phyllosticta japonica Miy. on rice, October 25, 1943, Alvin, Texas; October 28, 1943, Charleston, South Carolina. Not reported in the United States.

Phyllosticta osmanthi F. Tassi on Osmanthus fortunei, February 5, 1945, New Orleans, Louisiana. "Possibly the first record in the United States. Conidia definitely too short for P. sinuosa Ell. & Mart., the smallest spored of the reported species." (D. P. Limber).

Puccinia bartholomaei Diet. on Calotropus gigantea, April 10, 1944, Key West, Florida.

Phyllosticta sp. (not P. sapotae Sacc.) on Achras sapota, April 7, 1944, Big Pine Key, Florida.

Phyllosticta sp. (not P. agaves Maub. reported on Agave sp. in Algeria) on Agave americana, February 5, 1945, New Orleans, Louisiana.

Phyllachora cinnae Tehon & Daniels on Agropyron subsecundum, September

16, 1944, Brunswick, Maine. This may be a new host species for this fungus.

Phyllosticta virginiana (Ell. & Holw.) F. Tassi on Prunus mahaleb, October 28, 1943, Clinton, Washington.

Phaeosaccardinula martini (Ell. & Sacc.) Hoehn. on Quercus virginiana, January 29, 1944, Bay St. Louis, Mississippi.

Rhabdospora ramealis (Desm. & Rob.) Sacc. on Rubus leucodermis, June 12, 1944, Edison, Washington.

Selenophoma donacis var. stomaticola (Bauem.) Sprague & Johnson on barley, July 13, 1944, Orenco, Oregon.

Septoria sp. on Osmanthus americanus, January 28, 1944, Bay St. Louis, Mississippi. No species of Septoria reported on this host.

Septoria sp. on Sabal minor, December 9, 1943, Richmond Hill, Georgia. "Do not find anything with which this fungus agrees." (E. K. Cash).

Septoria sp. on Ranunculus pusillus, March 25, 1945, Lafayette, Louisiana. Does not agree with S. ranunculgcearum Poir. listed by Seymour.

Septoria sp. (does not fit S. ampelopsidis Ell. or S. hederae Desm.) on Ampelopsis arborea, April 6, 1945, Baton Rouge, Louisiana.

Septoria sp. on Achras sapota, April 8, 1944, Sugar Loaf Key, Florida. "No Septoria reported on this host in records available." (E. K. Cash).

Sorosporium everhartii Ell. & Gall. on Andropogon scoparius, November 24, 1944, Beaufort, South Carolina; on Andropogon virginicus, November 4, 1944, Ridgeland, South Carolina.

Septoria sp. on Symplocos tinctoria, November 17, 1943, New Bern, North Carolina. "Does not agree with any species found described on Symplocos." (E. K. Cash).

Sphaceloma violae Jenkins on Viola sp. (cult.), March 25, 1945, Lafayette, Louisiana.

Stagonospora sp. on Echinocystis oregana, June 14, 1944, Orcas Island, Washington. Apparently an undescribed species.

Stomiopeltis sp. on Eucalyptus sp., March 21, 1944, Avery Island, Louisiana. "No species of this genus described on this host." (E. K. Cash).

Synchytrium cerasti M. T. Cook on Cerastium viscosum, March 20, 1945, Baton Rouge, Louisiana. A new species. (See Mycologia 37: pp. 288 - 290, 1945).

Synchytrium lepidii M. T. Cook on Lepidium virginicum, March 21, 1945, Baton Rouge, Louisiana. A new species. (See Mycologia 37, pp. 284 - 294).

These Synchytriums were collected by Dr. I. Hein and identified by Dr. Cook.

Taphrina bullata (Berk. & Br.) Tul. on pear, May 9, 1944, E. Stanwood, Washington. Apparently a first report of this fungus in the United States.

Uromyces punctatus Schroet., II-III, on Astragalus agninus, December 9, 1944, in guayule plantings south of army air base; February 19, 1945 in guayule plantings west of airport, Yuma, Arizona. "Possibly a new host record as Arthur does not list this species of Astragalus as infected by this rust." (W. H. Wheeler).

Uromyces coloradensis Ell. & Ev. var. maritimus Arth. on Vicia americana, June 7, 1944, Anacortes, Washington. "5% infection, severe and destructive." (M. J. Forsell).

Annulus tabaci var. virginiensis Holmes (Tobacco-Ringspot Virus, Typical Strain) on alfalfa, May 4, 1945, Harbor Island, Washington.

Cabbage Ringspot-Virus on horseradish, May 30, 1945, Snohomish, Washington.

"Cabbage Black Ring" on cabbage, January 22, 1945, Compton, California. According to Dr. M. W. Gardner, apparently the same as Cabbage Ringspot disease and Brassica Virus 1.

Marmor cucumeris var. judicis Holmes (Cucumber-Mosaic Virus, Indicator Strain) on Primula sp., May 4, 1944, Tacoma, Washington.

Squash-Masaic Virus (not Marmor cucumeris var. vulgare Holmes) on Cucurbita (pepo ?), November 21, 1944, near Indio, California. According to Drs. H. H. P. Severin and J. H. Freitag this is a second prevalent squash disease in California, particularly along the coast but also known inland. The planting examined was 100 percent affected.

Marmor lactucae Holmes (Lettuce-Mosaic Virus) on lettuce, December 9, 1944, near Blythe, California; December 6, 1944, near El Centro, California and Yuma, Arizona.

Marmor medicaginis Holmes apparently, according to J. A. Stevenson and C. L. LeFebvre (Alfalfa-Mosaic Virus) on alfalfa, March 30, 1944, Richmond Beach, Washington.

Marmor pisi Holmes (Pea Enation-Mosaic Virus) on peas, February 25, 1945, Altadena, California; Dana Point, California, April 17, 1945; June 30, 1944, Portland, Oregon.

Marmor pisi Holmes (Pea Enation-Mosaic Virus) on Melilotus (indica ?), November 12, 1943, Vallejo, California. Dr. H. T. Osborn states that this is the first record of Pea Enation-Mosaic Virus, to his knowledge, on Melilotus.

"Yellow Leaf Roll" (virus) on potato, March 16, 1945, Yuma, Arizona. According to Drs. M. W. Gardner, J. H. Freitag, and H. H. P. Severin of the University of California, this is a rather recently noted disease.

Swollen nodes and aerial tubers are typical of the disease. Prior to this collection, to the best of their knowledge, the disease had not been found in Arizona. It has been reported from Washington State.

According to W. H. Wheeler, and Dr. H. E. Thomas of the University of California, a specimen of avocado collected November 9, 1944 at San Diego was very suggestive of a virus disease. None has been reported on this host.

What appears very suggestive of a virus disease was collected on prune June 9, 1944, New District, Clallam County, Washington. According to Dr. H. E. Thomas no similar disease is recorded on prune. Nanus pruni (Prune-Dwarf Virus) is reported from New York State.

A virus disease not matching those already described on rose, according to Dr. H. E. Thomas was found on this host May 19, 1944 at Stanwood, Washington.

U. S. BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE

UNREPORTED POWDERY MILDEWS. II

C. E. Yarwood

Powdery mildews collected in California by members of the staff of the Division of Plant Pathology on the following hosts, are believed to be new records for the United States:

ALTHEA CANNABINA, no perithecia, conidiophores of Erysiphe cichoracearum type, lathhouse, Berkeley, June 14, 1940.

BEGONIA sp. (tuberous begonia), no perithecia, conidiophores of E. cichoracearum type, greenhouse, Capitola, November 21, 1935.

BRASSICA ARVENSIS (charlock) no perithecia, conidiophores of E. polygoni type. San Juan, August 2, 1934.

CEANOTHUS ARBOREUS, no conidiophores or perithecia, Berkeley, August 11, 1939.

CIRSIUM EDULE, no perithecia, conidiophores of E. cichoracearum type, Berkeley, August 2, 1944.

COTONEASTER sp., no perithecia, conidiophores of Podosphaera type, March 14, 1941.

CYNODON DACTYLON, no perithecia, conidiophores of E. graminis type. Victoria Island, October 11, 1934.

EMILIA FLAMMEA, no perithecia, conidiophores of E. cichoracearum type, greenhouse, Berkeley, October 18, 1935.

FELICIA AMELLOIDES, conidiophores and perithecia of E. cichoracearum, greenhouse, Berkeley, December 18, 1939.

HARDENBERGIA sp. conidiophores and perithecia of E. cichoracearum, Santa Barbara, August 6, 1935.

HEBE HULKEANA, no perithecia, conidiophores of E. cichoracearum type, Berkeley, August 21, 1940.

JUGLANS REGIA (walnut), no perithecia, conidiophores of E. polygoni type, Berkeley, August 1, 1940.

LIPPIA CANESCENS, no perithecia, conidiophores of E. cichoracearum type, Berkeley, June 13, 1940.

MALOPA GRANDIFLORA, no perithecia, conidiophores of E. cichoracearum type, Lathhouse, Berkeley, June 14, 1940.

MALVA CHINENSIS, no perithecia, conidiophores of E. cichoracearum type, Morgan Hill, October 31, 1935.

MODIOLA CAROLINIANA, no perithecia, conidiophores of E. cichoracearum type, Berkeley, November 1, 1938.

NICOTIANA AFFINIS, no perithecia, conidiophores of E. cichoracearum type, Berkeley, June 12, 1939.

PETUNIA HYBRIDA, no perithecia, conidiophores of E. cichoracearum type, Berkeley, August 10, 1934.

(PHOTINIA) HETEROMELES ARBUTIFOLIA (Toyon), no perithecia or conidiophores found, Berkeley, June 6, 1936.

PLANTAGO HIRTELLA, no perithecia, conidiophores of E. cichoracearum type, Manchester, August 13, 1942.

PRUNUS CERASIFERA (Myrobalan plum) no perithecia or conidiophores found, greenhouse, Berkeley, June 22, 1937.

PRUNUS ILICIFOLIA (Catalina cherry), no perithecia, conidiophores of P. leucotricha type, Santa Barbara, July 29, 1935.

PRUNUS LAUROCERASUS (cherry laurel), no perithecia, conidiophores of P. leucotricha type. Berkeley, August 22, 1936.

PRUNUS LUSITANICA, no perithecia, conidiophores of P. leucotricha type. Berkeley, July 1, 1942.

PRUNUS sp. (cultivated plum fruits) no perithecia, conidiophores of P. leucotricha type, Berkeley, July 2, 1945.

QUERCUS MONGOLICA (no perithecia), conidiophores of Sphaerotheca lanestris type, Berkeley, July 3, 1945.

RANUNCULUS sp. (cultivated Ranunculus), conidiophores and perithecia of E. cichoracearum, Berkeley, June 14, 1938.

RAPHIOLEPIS, sp., no perithecia, conidiophores of E. polygoni type, Berkeley, August 1, 1940.

SIDALCEA CORISANDE, no perithecia, conidiophores of E. cichoracearum type, lathhouse, Berkeley, June 14, 1940.

SPIRAEA BUMALDA, no perithecia, conidiophores of P. leucotricha type, Berkeley, April 16, 1935.

UMBELLULARIA CALIFORNICA (California laurel), no perithecia, conidiophores of E. polygoni type, Berkeley, May 27, 1944.

WISTERIA SINENSIS, no conidiophores or perithecia, Berkeley, July 25, 1944.

DIVISION OF PLANT PATHOLOGY, UNIVERSITY OF CALIFORNIA, BERKELEY.

ELM PHLOEM NECROSIS IN ARKANSAS AND OKLAHOMA

Howard W. Larsh

Elm phloem necrosis, heretofore unknown to occur in Arkansas and Oklahoma, was found in localized areas in each of these States during June, and later in the summer of 1945.

Trees in all stages of decline were found, from early wilting of the foliage to complete defoliation. Most of the trees observed in June, however, were in the early stage of wilting with very little defoliation. In each instance when American elms showed any degree of yellowing and defoliation, the bases of the trunks and the buttress roots were examined. In nearly every case a yellowish to butterscotch discoloration of the inner phloem was present and a faint but distinct wintergreen odor could be detected in the affected tissue. To ascertain definitely the wintergreen odor, the affected tissue was carefully removed from the remainder of the bark, placed in a small jar and sealed for a few minutes. This procedure usually resulted in a strong odor of wintergreen. In addition to the above characteristic symptoms of the disease, flecking and brown streaking of the phloem area was frequently observed. In the diseased trees the inner bark could be removed from the remainder of the bark with relative ease.

No attempt was made to ascertain the distribution of the disease within Arkansas and Oklahoma; however, surveys were made through each of these States where the American elm grows in large numbers to determine whether phloem necrosis occured in these areas.

During the early growing season of 1945, weather conditions in these areas were conducive to foliage diseases. Rather early in the season, anthracnose and leaf blight caused yellowing and slight defoliation,

which were complicating factors in early determination of phloem necrosis. Severe infestation by terrapin scale and lace bug interfered with determination later in the season.

In Arkansas, a survey was made from Fayetteville north to Gateway, then east on U. S. Highway 62 to Piggott, and from Piggott south to Jonesboro on State Highway 1. Infected trees were observed between Corning and Piggott on U. S. Highway 62. The stands of American elm in this area were thickest on the banks of small creeks and in fields adjoining the highway. In the city of Jonesboro, where native American elms had been planted, several trees were affected by phloem necrosis. In a localized area of this city, some trees had been removed in past years. According to the owner of the property, the removed trees showed symptoms characterized by the recently infected trees still standing. Therefore, there is some justification in assuming that the disease has been present in Jonesboro, Arkansas for several years.

Infected trees have been examined in northeastern Oklahoma near the cities of Miami, Wyandotte, and Bartlesville. The most concentrated area of infection centered within the city of Bartlesville. Several trees in all stages of the disease were observed early in June of this year. Characteristic foliage symptoms as well as other symptoms ascribed to phloem necrosis were present.

Since these early surveys, many reports from various areas of the State of Oklahoma have been received. Specimens have been sent to this laboratory for study. Most of these, however, have been aerial portions of American elms infected by foliage disease-producing organisms or infested with lace bugs. Several reports of possible infected trees in Tulsa and Oklahoma City have been received from Mr. Clyde A. Bower, Oklahoma State Department of Agriculture. None of these trees have yet been examined by the author.

Dr. T. W. Bretz, U. S. Department of Agriculture, Division of Forest Pathology, has recently had an occasion to check the trees in northeastern Oklahoma. In a letter to the author on September 4, 1945, Dr. Bretz wrote: "In addition to finding the disease at Bartlesville, I also found it at Miami, Oklahoma.".

There seems to be little doubt therefore, on the basis of the aerial symptoms combined with those affecting the inner bark at the tree base, that phloem necrosis is responsible for the death of many American elm trees in Arkansas and Oklahoma.

(DEPARTMENT OF PLANT SCIENCES, UNIVERSITY OF OKLAHOMA, NORMAN, OKLAHOMA)

Work initiated under EMERGENCY PLANT DISEASE PREVENTION PROJECT

MYROTHECIUM CROWN AND STEM CANKER OF GREENHOUSE SNAPDRAGONS IN COLORADO

Stephen Wilhelm, William Gunesch, and Kenneth F. Baker

Mature snapdragon plants in a commercial greenhouse in Denver, Colorado were observed in the fall and winter of 1944 to be dying from a crown and stem canker caused by Myrothecium roridum Tode. Diseased plants were scattered through the benches in amounts of approximately 2 to 3 percent. The most conspicuous symptom was the wilting of leaves

and flowering stems. The crowns at first had water-soaked lesions, which later became sunken, dry, cracked cankers, covered with thin, white mycelium and numerous sporodochia. These sporodochia were black, about 1 mm in diameter, with a margin of white mycelium; they frequently coalesced to form larger patches. Sporodochia are very characteristic and are formed abundantly on infected stems grown under moist conditions or held in a moist chamber, and also form on culture media. Cankers were observed to extend several inches up the stems, but some represented independent infections.

Excessive moisture favors the spread and destructiveness of the disease. In Texas Myrothecium crown rot was reported (10) to cause over 90 percent loss in greenhouse snapdragons in 1933-34, but similar losses have not been reported for other crops.

The soil and benches in which the plants were grown had been steam sterilized, but the seed soil was not so treated, and it is possible that this could have been the source of infection. No other plants in this greenhouse were infected with the fungus.

Myrothecium roridum has been recorded as fairly common on viola and pansy stems and leaves in England (2, 5, 7, 9), and on snapdragon stems in Texas and England (7, 10, 11). Pathogenicity has been established for these hosts (9, 10). Since its description in 1790 the fungus has also been reported on Agave sp. from Mexico (1), Bignonia tweediana leaves (8), Corchorus olitorius and Dolichos lablab leaves in Sierra Leone (4, 5), Eleusine indica leaves (6), Hibiscus esculentus, Impatiens holstii, and Luffa acutanguła leaves in Sierra Leone (3, 4, 5), leaves of Malva sp., Mathiola incana, and onion, stems of Orobanche rubens and Phragmites communis, and wood of Pinus sylvestris, Quercus, spp. and Syringa vulgaris (8), tomato fruits and stems in Texas (11), Trichosanthes anguina in Sierra Leone (4, 5), and on rotting paper and wood and Russula adusta (6, 8). The fungus has been reported in Austria, Belguim, Ceylon, England, Germany, Hungary, Italy, Mexico, Sierra Leone, Sweden, Switzerland, and the United States (Texas, South Carolina, New England)[1]. This cosmopolitan fungus apparently is most successful as a saprophyte. It is, however, capable of actively parasitizing vigorous plants and has been shown (9) to infect violas and pansies in the absence of wounds. The infection of snapdragons apparently is similar.

The control of the disease is largely a matter of sanitation and proper culture. Water should not be used in excess, and overhead syringing or sprinkling should be avoided. Sterilized soil should be used consistently in seed flats as well as benches. Infected plants should be removed and burned.

Literature Cited.

1. Bureau of Entomology and Plant Quarantine. Service and regulatory announcements. List of intercepted pests, 1943. U. S. Dept. Agr.,

---

[1] [Also in Louisiana on leaves of soybean and cowpea, and in Mississippi on cotton leaves (Douglas C. Bain, PDR 28 (26): 834. Aug. 22. 1944)]

Bur. Ent. Pl. Quar. 1944.
2. Chesters, C. G. C., and C. J. Hickman. Preliminary report on stem and root rot of viola and pansy. Natl. Viola and Pansy Soc. Yrbk. 1938: 13 - 20. 1939.
3. Deighton, F. C. Mycological work. Rept. Dept. Agr. Sierra Leone 1933: 14 - 20. 1935. (Abst. in Rev. Appl. Mycol. 14: 427 - 428. 1935.)
4. Deighton, F. C. Mycological work. Rept. Dept. Agr. Sierra Leone 1935: 22 - 26. 1936. (Abst. in Rev. Appl. Mycol. 15: 778 - 779. 1936.)
5. Deighton, F. C. Mycological work. Rept. Dept. Agr. Sierra Leone 1937: 45 - 47. 1938. (Abst. in Rev. Appl. Mycol. 18: 156 - 157. 1939.)
6. Lindau, G. Myrothecium. In Rabenhorst's Kryptogamen-Flora von Deutschland, Oesterreich und der Schweiz, Aufl. 2, 1 (9): 623. 1910.
7. Moore, W. C. Report on fungus, bacterial and other diseases of crops in England and Wales for the years 1933-1942. Min. Agr. Fisheries Bull. 126: 79 - 90. 1944.
8. Oudemans, C. A. J. A. Enumeratio Systematica Fungorum 1: 67, 576, 825, 1128. 1919; 2: 778. 1920; 3: 306, 307. 1921; 4: 45, 465, 722, 731. 1923.
9. Preston, N. C. The parasitism of Myrothecium roridum Tode. Trans. Brit. Mycol. Soc. 20: 242 - 251. 1936.
10. Taubenhaus, J. J. On a black crown rot of greenhouse snapdragons caused by Myrothecium roridum Tode. Phytopath. 25: 969 - 970. 1935.
11. Taubenhaus, J. J., and G. E. Altstatt.-Myrothecium on tomatoes. Texas Agr. Exp. Sta. Ann. Rept. 49: 98. 1937.

DIVISION OF PLANT PATHOLOGY, UNIVERSITY OF CALIFORNIA, LOS ANGELES, AND PARK ELITCH FLORAL CO., DENVER, COLORADO.

A REPORT ON THE EELGRASS SITUATION IN THE ANNISQUAM (MASSACHUSETTS) AND MYSTIC (CONNECTICUT) TIDEWATER RIVERS IN THE SUMMER OF 1945

Ralph W. Dexter

During the months of August and September, 1945, observations were made on the occurrence of eelgrass (Zostera marina) in the Annisquam (Massachusetts) and Mystic (Connecticut) waterways as follows:

I. Annisquam River -- Cape Ann, Massachusetts.

On August 27 and September 15 visits were made to the Annisquam River. The shallow waters at low tide were examined over much of the northern half of the inlet. Fragments of eelgrass, up to one and one-half feet long were commonly found floating on the surface, particularly near the entrance of Ipswich Bay into the Annisquam inlet. Some were uniformly bright green, but most of the blades were streaked with brown and some were completely brown, indicating the presence of eelgrass disease. In

a side channel leading to Goose Cove nearby, a number of patches of eelgrass were located growing in the channel-way. Some consisted of a few plants, many were two or three square feet in area, and a few covered as much as a square yard. In Goose Cove itself, which is largely separated from the main channel by a road-fill, there was found a fringe of eelgrass varying from one to several feet wide all the way around the cove. Much of this growth showed no signs of disease. In the center of the cove a dense growth of eelgrass covered an area of several acreas. This was the most extensive and abundant growth of eelgrass known to occur in this locality since 1933. According to a resident on the shores of this area, the eelgrass began to return there to a noticeable degree in the summer of 1942 and each year has become more abundant. It was in Goose Cove that the eelgrass held out the longest in this region when it was virtually wiped out in 1932-33 along the Eastern seaboard. The growth of eelgrass seems to be favored by the conditions of the cove- reduced salinity through entrance of fresh water, a rapid tidal current, and a rocky shoreline. The high water margin of this cove was strewn with accumulated dried fragments of eelgrass. No eelgrass was found living in Lobster Cove, Mill River, Mill Pond, or in the main channel of the Annisquam River so far as examined. (see Dexter, Jour. Wildlife Management. 8 (3): 173 - 176. 1944. for earlier reports).

II. Mystic River - Mystic, Connecticut.

While stationed at the State Lobster Hatchery at Noank, Connecticut, from August 3 to 21, the writer had several occasions to observe eelgrass in the lower section of the Mystic River. The shoreline at low tide from the mouth of the river where it enters Fisher's Island Sound at Noank to the Mystic Shipyards including the western margin of Mason's Island, was examined at one time or another. Fragments of eelgrass were commonly found floating in the water, especially in the tidal currents. As was found in the Annisquam River at Gloucester, some blades were bright green and others bore the brown streaks of the eelgrass disease in varying degrees. The greater part of the fragments examined were diseased. These floating fragments were also seen for four or five miles out in Block Island Sound off the coast of Rhode Island on September 8.

Around the southern extremity of the Mystic River, at Lighthouse Point, there was found a strip of eelgrass several feet in width and continuous for many yards at a stretch. All of the eelgrass around this point was covered with a heavy coat of algae and diatoms which colored the whole mass of vegetation a light brown color. Many coves and indentations along the shore on either side of Lighthouse Point harbored patches of eelgrass. Some were small isolated patches; others were strips of a yard or two in length. The blades were up to four feet in length.

In Beebe Cove (or Noank North Cove) at Noank, separated from the river for the most part by a railroad-fill, there was discovered an area of several acres just within the narrow entrance-way containing an abundant growth of eelgrass, much of which seemed to be healthy. Around the edge of this patch it gradually intermingled with ditch grass (also known as wigeongrass) which became more and more dominant until it formed a solid growth throughout the remainder of the cove. Residents

in the area report that the ditch grass came into the cove during the past several years in the absence of eelgrass. The shoreward margin was a pure stand of ditch grass. The eelgrass was confined to the deeper water and in the area of rapidly moving water. North of the cove and along the margin of Mason's Island scattered patches and strips and occasional single plants of eelgrass were located. Thin windrows of washed-in eelgrass were observed in numerous places along the shores of the river.

Eelgrass seems to be well established in the area particularly around rocky points, rocky islands, and in coves where there is a good current of water flowing, although there are many stretches of shoreline without any eelgrass. It has been observed returning for the past three years by residents in this region. Mr. E. E. Palmer informed the writer that eelgrass was common at Lathrop's Dock in Mystic in 1944. Previous to 1932 it was abundant throughout the Mystic River on all shallow flats and in all coves.

KENT STATE UNIVERSITY, KENT, OHIO,
AND BINGHAM OCEANOGRAPHIC LABORATORY, YALE UNIVERSITY

DISEASES OF VEGETABLE CROPS IN PALM BEACH AND BROWARD COUNTIES, FLORIDA

G. R. Townsend, R. C. Cassell, and E. L. Felix

CELERY Losses from Rhizoctonia damping-off in celery seed beds, usually expected in the Everglades area, have been negligible during recent weeks owing to the widespread and efficient use of wettable Spergon sprays at intervals of four to seven days during the early period of growth of the celery plants in the beds. The weather for the period (July-October) has been exceptionally favorable for the development of damping-off, which in other years has caused the loss of 50 percent of the plants being grown for the winter crop. Many seedbeds were sown too thickly for the best results when damping-off is controlled, and consequently now have spindly plants. Beds sown at half the usual rate have excellent plants.

Early blight (Cercospora apii) of celery set in the field is more prevalent than usual at this time of the year, and is believed to have resulted from the failure to commence spraying operations as soon as is desirable. Rains and labor difficulties have made it difficult to spray as often as is desirable.

Bacterial blight (Pseudomonas apii) was seen for the first time in a few celery seed beds during September but made no progress after one or two applications of Bordeaux mixture or other copper fungicides.

POTATOES Planting of a larger than usual acreage of fall potatoes in the Everglades was hindered by the September hurricane which caused the loss of about 700 acres planted before the storm. The acreage finally planted was about the same as last year. Several carloads of certified seed potatoes from North and South Dakota arrived in very poor condition due to the development of Fusarium and bacterial rots enroute.

PEPPERS Bacterial blight of peppers (Xanthomonas vesicatoria) has been observed in fields both in the Everglades and the coastal area. A forty-acre field near Belle Glade was severely affected, especially in the variety Neapolitan. The disease was present in 30 to 40 percent of the fields examined in the coastal area, and varied in severity from a trace to 15 percent. Seed treatment is not generally practiced for the control of this disease.

One planting of peppers near Delray was found to be badly affected with Cercospora leaf spot (C. capsici). Prevalence was 100 percent and the average severity about 10 percent on plants where the fruits were just forming. Stem lesions were also present and were severe enough to cause breakage in some cases.

BEANS Fields of snap and lima bean varieties are all affected with root rots (Rhizoctonia spp. and others). Most fields examined in the coastal area are 100 percent affected, some lightly and others more severely. In the Everglades area large acreages of beans were lost during the September hurricane but the replanted crop is in generally fine condition with root rot much less prevalent and less severe than on the coastal soils.

Halo blight (Phytomonas [Pseudomonas] medicaginis var. phaseolicola) has been observed as a trace in one field of snap beans near Delray, and specimens of pods severely affected have been received from one field in the Everglades.

TOMATOES Fusarium wilt, F. oxysporum f. lycopersici, has been found in two fields in the coastal area to date. Damage from wilt and excessive moisture was almost indistinguishable in both fields, but wilt was present in 30 to 40 percent of the plants and both fields, comprising about three acres, were plowed up just as the plants had reached the flowering stage.

EGGPLANTS Eggplants in the coastal area are generally but lightly affected with Phomopsis blight, P. vexans. Only one field with maturing fruits has been encountered. Prevalence in this field was about 80 percent and severity about 2 or 3 percent. The disease was present as leaf spot, fruit rot, and petiole lesions. Only a trace of fruit rot was to be found.

SQUASH Mosaic (virus) has been found on a few scattered plants of one field. Plants of the most advanced fields are now in early blossom.

EVERGLADES EXPERIMENT STATION
November 1, 1945

TOMATO TIP BLIGHT IN TEXAS, AND NOTES ON OTHER DISEASE CONDITIONS

P. A. Young

Tomato Tip Blight. Yesterday, I found one tomato plant with prominent symptoms of the tip blight [Lethum australiense var. lethale] virosis in my garden. This is the first time that I have seen or heard of this tomato disease in East Texas, and I do not know how it got here. Several years ago, I saw several fields of tomatoes in the Winter Garden region (Laredo to Eagle Pass, Texas) badly damaged by tip blight (as described in Oregon Cir. 128). In the Plant Disease Reporter (22 (1): 7, 1938), we gave the first paragraph under the name of spotted wilt of tomatoes, but it is time to correct that determination. The symptoms were characteristic of those of tip blight as it was described in Oregon Circular 128, published later in 1938. I do not think that I have seen typical cases of spotted wilt.

Other Tomato Diseases in East Texas. This is the second successive year with abundant rains (nearly 60 inches of rain per year) and in this warm climate, diseases of leaves and fruits have been unusually abundant and destructive. In the large crop of spring tomatoes, of which 980 carloads of green wrap tomatoes were sold from Jacksonville alone, early blight [Alternaria solani] and Septoria leaf spot [S. Lycopersici] were very destructive. Both bacterial canker [Corynebacterium michiganense] and bacterial spot [Xanthomonas vesicatoria] diseases caused extensive damage, including the ruination of the fruit in several fields and serious damage in many fields. Bacterial speck disease [Pseudomonas tomato] appeared in serious abundance in this country for the first time this year. These are the three bacterial diseases described in USDA Circular 282.

TEXAS AGRICULTURAL EXPERIMENT STATION, TOMATO DISEASE LABORATORY, JACKSONVILLE

NOTES ON BORON DEFICIENCY OF APPLE IN PENNSYLVANIA

F. H. Lewis and F. N. Hewetson

In the summer of 1944, the senior author observed severe dieback and rosette due to boron deficiency in a 10-year-old York Imperial orchard near Bendersville in Adams County. Very little fruit was present but a few apples were found with late-season internal cork. Internal cork was later found in two Rome Beauty orchards and one Cortland orchard near Arendtsville and in one Rome Beauty orchard near York Springs. Rome Beauty generally had less than 30 percent of the fruit affected, but the fruit of Cortland was a total loss from internal cork and codling moth. No dieback or rosette was observed on either Rome Beauty or Cortland. The owner of the Cortland orchard stated that internal cork was present in that orchard a few years ago, and that an application of borax at that time gave control.

Borax was applied on the soil in some of these orchards in the spring

of 1945.at the rates suggested by Burrell (Burrell, A. B. The boron-deficiency disease of apple. New York (Cornell) Agr. Exp. Sta. Bull. 428: 1-28. 1940). Rome Beauty and York Imperial trees showed definite improvements over their previous conditions, both being free from internal cork while the York Imperial 1945 growth was normal. On Cortland, the borax application was not made until late August. About 5 percent of the fruits of this variety had internal cork at harvest.

Internal cork was found in Rome Beauty this fall (1945) in one of the junior author's experimental plots near Mont Alto. It was present in appreciable quantities only in one row which had not received borax. No cork was found in another untreated row in another part of the orchard.

This disease has not previously been considered a problem in the Cumberland Valley of Pennsylvania. Its appearance in the past two years indicates that borax should be applied in areas where this trouble has been found.

PENNSYLVANIA STATE COLLEGE

BRIEF NOTES ON PLANT DISEASES

RUTABAGA SEED TREATMENT IN WISCONSIN: As a result of losses from black rot (Xanthomonas campestris) on rutabaga in previous years, seed treatment with hot water was given to 350 pounds of seed in the Barron County area in 1945. The treating was done in cooperation with the local creamery, the county agent, and one of the leading growers. An examination of the fields at the end of the season showed freedom from the common black rot disease. The growers are much pleased and plan to have their seed treated in following years.--R. E. Vaughan, Extension Plant Pathologist.

CHARCOAL ROT OF CORN LESS SEVERE IN EAST TEXAS: Charcoal rot (caused by Macrophomina phaseoli) caused only minor damage to the corn crop here this year; because the July rains minimized the hot dry weather that facilitated epidemics of the disease in the preceding two years.--P. A. Young, Texas Agricultural Experiment Station, Tomato Disease Laboratory, Jacksonville. Oct. 26.

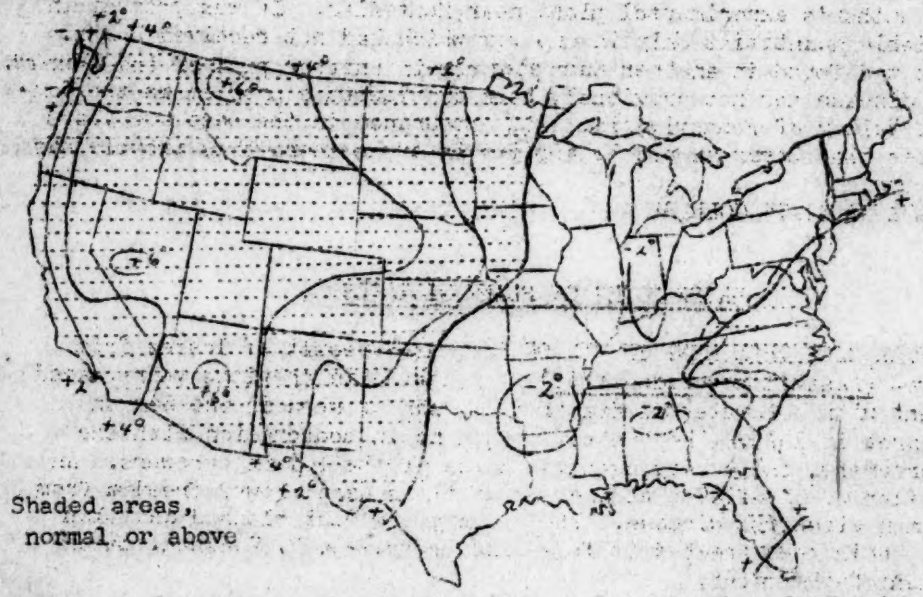
OCTOBER WEATHER

From U. S. Department of Commerce, Weather Bureau, Weekly Weather and Crop Bulletin for the week ending November 6, 1945.

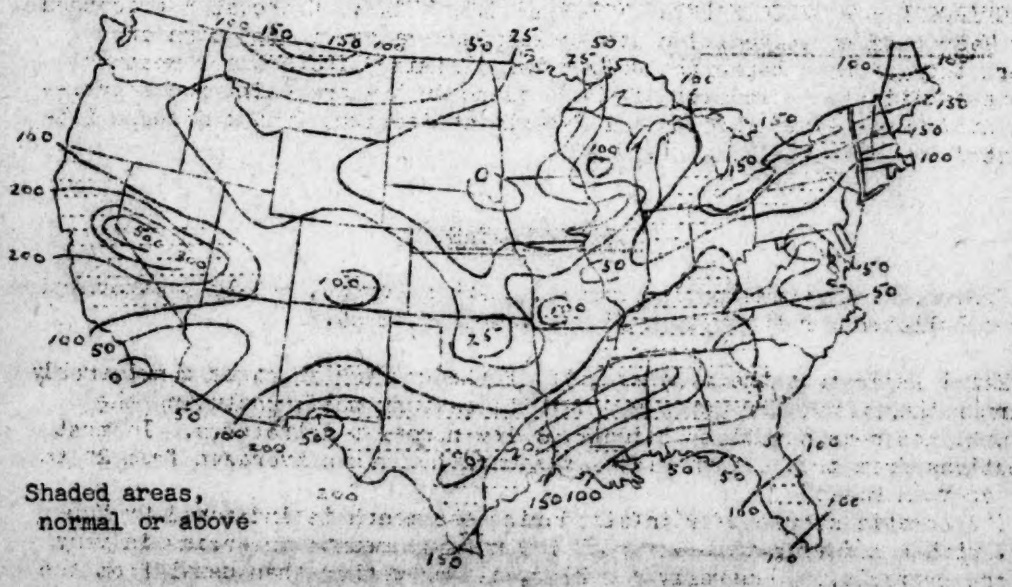
Map I shows that the western half of the country averaged considerably warmer than usual for October while the eastern half, including the South, had near normal to slightly below normal temperatures. In most sections from the Western Plains westward the month averaged from 2° to 6° above normal.

The erratic nature of rainfall during the month is indicated by Map II, with considerably above and below normal amounts appearing in very close proximity. Generally speaking, it was wetter than usual from the

Rio Grande Valley to Georgia and in the lower Lake region, New England, Nevada, and northern California. Amounts were more than twice their normals in a narrow strip from eastern Texas to west-central Georgia and over four times their normals in Nevada and east-central California. Some sections of the Middle Atlantic States and a large portion of the central and northwestern interior received less than half their usual October rainfall, with little or none in northeastern Nebraska and adjacent areas.



Map. I. Departure of Mean Temperature from the Normal, October, 1945



Map II. Percentage of Normal Precipitation for October, 1945